Title (en)

Process for removing carbon dioxide from combustion gases containing oxygen

Title (de)

Verfahren zur Beseitigung von Kohlendioxyd aus Abgasen, die Sauerstoff enthalten

Title (fr)

Procédé pour éliminer le dioxyde de carbone des gaz de combustion contenants de l'oxygène

Publication

EP 0588178 B1 19980121 (EN)

Application

EP 93114090 A 19930902

Priority

JP 24639792 A 19920916

Abstract (en)

[origin: EP0588178A2] A process for removing CO2 from a combustion gas which comprises bringing a combustion gas containing oxygen and CO2 and a CO2 absorbent solution into contact at the atmospheric pressure, thereby allowing the CO2 absorbent solution to absorb CO2 from the combustion gas, and, in the ensuing step, heating the absorbent solution that has absorbed CO2 to liberate CO2 and regenerate the CO2 absorbent solution, and circulating the regenerated solution for reuse. An aqueous hindered amine solution is used as the CO2 absorbent solution, and carbon steel is used in building the members of the equipment that contact the aqueous hindered amine solution. The absorbent solution may contain cupric carbonate. The invention is advantageously carried into practice on an industrial scale because of low equipment cost owing to little corrosion and a saving of the energy required for the regeneration of the absorbent solution.

IPC 1-7

B01D 53/14

IPC 8 full level

B01D 53/14 (2006.01); **B01D 53/18** (2006.01); **B01D 53/62** (2006.01)

CPC (source: EP KR)

B01D 53/1475 (2013.01 - EP KR); **B01D 53/1493** (2013.01 - EP KR); B01D 2252/20436 (2013.01 - KR); Y02A 50/20 (2017.12 - EP); Y02C 20/40 (2020.08 - EP)

Citation (examination)

- DE 2804418 A1 19780817 - EXXON RESEARCH ENGINEERING CO
- DE 2628376 A1 19770113 - EXXON RESEARCH ENGINEERING CO

Cited by

US6146603A; EP0879631A1; EP0705637A1; US5618506A; CN1057018C; US6497852B2; US9028784B2; US9174168B2; US8647413B2; US8728209B2; US9162177B2; US8673227B2; US8784761B2; US8623307B2; US8864879B2; US8182577B2; US8293200B2; US8518156B2; US8790605B2; US8292989B2; US8404900B2; US8168149B2; US9399192B2; US7641717B2; US8308849B2; US8329128B2; US7846240B2; US8404027B2; US8758493B2; US8764892B2

Designated contracting state (EPC)

DE DK FR GB IT NL SE

DOCDB simple family (publication)

EP 0588178 A2 19940323; **EP 0588178 A3 19940427**; **EP 0588178 B1 19980121**; DE 69316492 D1 19980226; DE 69316492 T2 19980820; DK 0588178 T3 19980921; JP 2895325 B2 19990524; JP H0691135 A 19940405; KR 0123030 B1 19971112; KR 940006632 A 19940425

DOCDB simple family (application)

EP 93114090 A 19930902; DE 69316492 T 19930902; DK 93114090 T 19930902; JP 24639792 A 19920916; KR 930018594 A 19930916